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Notes on Two Species of the Genus *Perlohmannia* Berlese  
(Acari, Perlohmanniidae)  
Taxonomic Notes on Oribatid Mites of Hokkaido. II

*With 7 Text-figures*

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(Communicated by T. UCHIDA)

**ABSTRACT** Two species of soil mites, *Perlohmannia coiffaiti* Grandjean and *P. gigantea* (Aoki), comb. nov., belonging to the family Perlohmanniidae are newly recorded from Hokkaido. In the former species newly recorded from Japan some notes on its individual variation are given. The latter has been reported from Honshu as *Apolohmannia gigantea* Aoki, but *Apolohmannia* seems to be synonymous with *Perlohmannia*.

In the course of the present studies we have collected a lot of specimens of the family Perlohmanniidae at five sampling places in Hokkaido. In the present collection are found the following two species, both of which are new to Hokkaido.

Genus *Perlohmannia* Berles

*Perlohmannia* Berlese, 1916, Redia 12: 176.

Type-species: *Lohmannia insignis* Berlese, 1904.

*Apolohmannia* Aoki, 1960, Jap. J. Zool., 12: 507. Syn. nov.

Type-species: *Apolohmannia gigantea* Aoki, 1960.

Having examined the type of *A. gigantea* and other material we have come to the conclusion that *Apolohmannia* Aoki should be suppressed as a synonym of *Perlohmannia* Berlese. *Apolohmannia* was originally proposed for *A. gigantea* by Aoki (1960) who separates it from *Perlohmannia* by tridactylity. This character may be, however, useful in separating species, but is of no generic value as

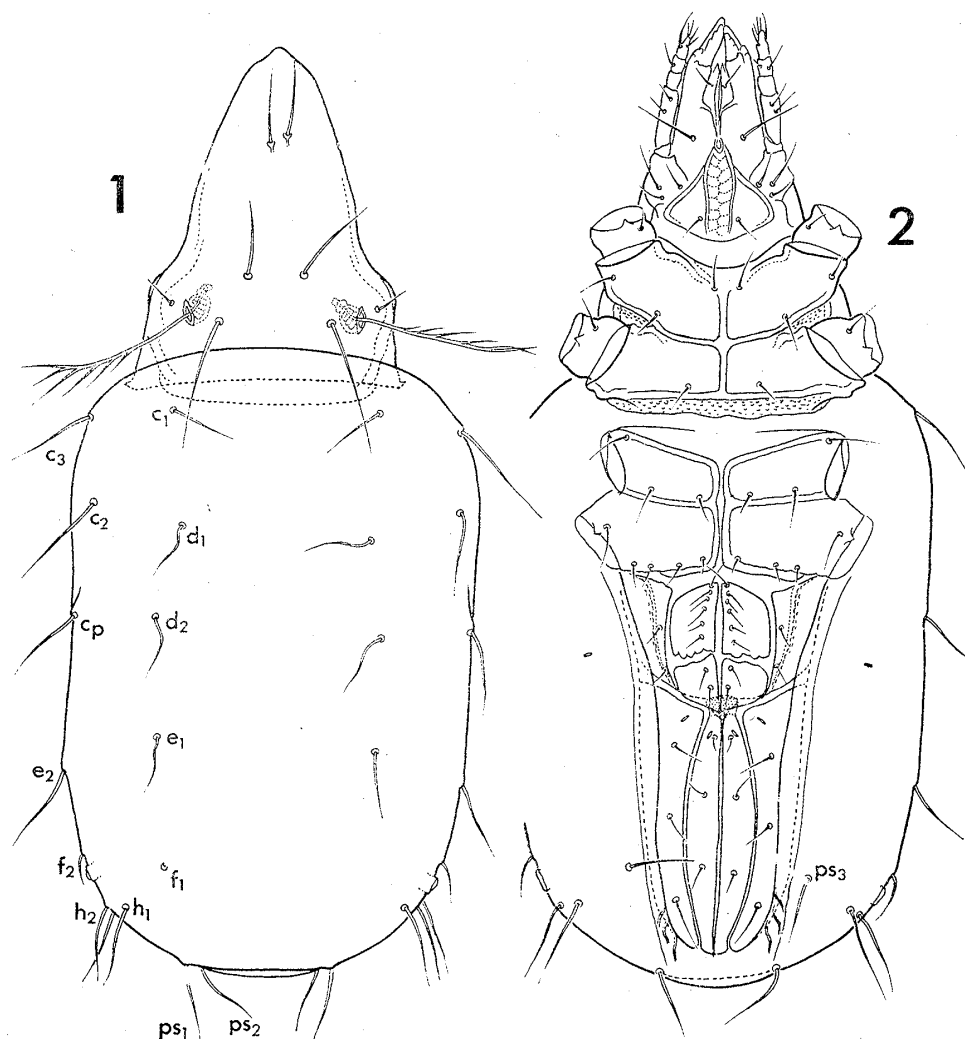
Grandjean (1961) already pointed out.

*Perlohmanna coiffaiti* Grandjean  
(Figs. 1-7)

*Perlohmanna coiffaiti* Grandjean, 1961, *Acarologia*, 3: 604, figs. 1-3.

This species was originally described from France and have firstly recorded from Japan. The specimens examined agree well enough with the original description, but the size of the present specimens is smaller than that of the original description. Having examined a lot of specimens, we have found that they are variable in certain characters as follows.

**Prodorsum** The rostrum is usually protuberant at the apex, sometimes simply rounded or rather angulate (Figs. 3, 4 and 7). The rostral setae are variable in



Figs. 1-2. *Perlohmanna coiffaiti* Grandjean. Fig. 1. Dorsal side. Fig. 2. Ventral side.

their situation as Grandjean pointed out; in some of the specimens examined they are placed on the same level, while in others one seta is located on a level more or less anterior to the other (Table 1 and Fig. 7).

Table 1  
Angles between line of insertions of rostral setae and line of insertions of lamellar setae (*Perlohmannia coiffaiti*)

Angle	Number of specimens
0°–5°	9
5°–10°	9
10°–15°	12
15°–20°	8
20°–25°	5
25°–30°	1
30°–35°	6
35°–40°	5
40°–45°	5
45°–50°	2
50°–60°	2

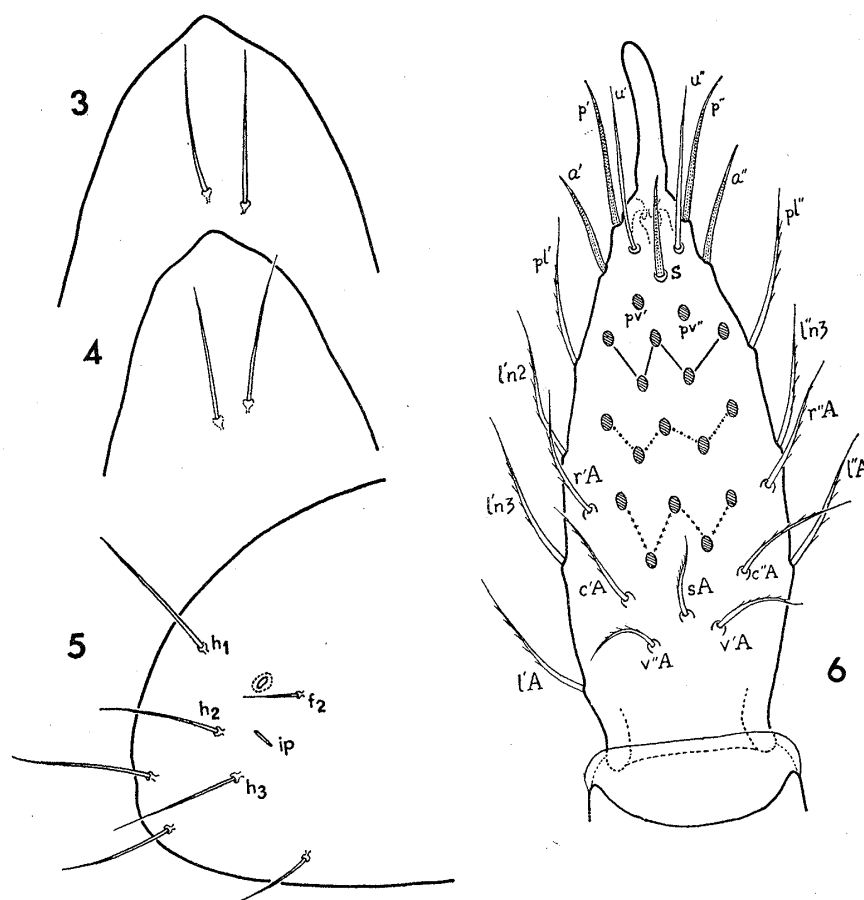
The number of pectinations on the sensillus is variable, ranging from 4 to 7. The pectinations on the left and right sides of each specimen are variable in number as shown in Table 2.

Table 2  
Number of pectinations on sensillus  
(*Perlohmannia coiffaiti*)

Number of pectinations		Number of specimens
Left	Right	
4	5	2
5	4	4
5	5	8
5	6	10
6	5	8
6	6	11
6	7	2
7	5	3
7	6	2
7	7	1

*Notogaster* Ratio of width to length of the hysterosoma variable, ranging from 0.58 to 0.69 in the specimens examined (0.65 in the original description).

*Ventral side* The ventral plate has normally 3 pairs of smooth anal and adanal



Figs. 3–6. *Perlohmanna coiffaiti* Grandjean. Figs. 3 and 4. Rostrum and rostral setae. Fig. 5. Lateral view of the posterior portion of notogaster. Fig. 6. Ventral view of tarsus I.

Table 3  
Number of genital setae (*Perlohmanna coiffaiti*)

Number of genital setae		Number of specimens
Left	Right	
5–2	6–2	2
6–1	6–2	2
6–2	5–2	1
6–2	6–1	1
6–2	6–2	62
6–2	6–3	1
6–3	6–2	1
7–2	6–2	1

setae, but one specimen has 4 setae on the left side of anal plate exceptionally. Three aggenital setae are generally present on each side but 2 setae are exceptionally found on the left or right aggenital plate. The genital plate is divided transversely into the anterior and posterior parts, the anterior having 6 pairs of setae, and the posterior 2 pairs in normal, but the number is more or less variable as shown in Table 3.

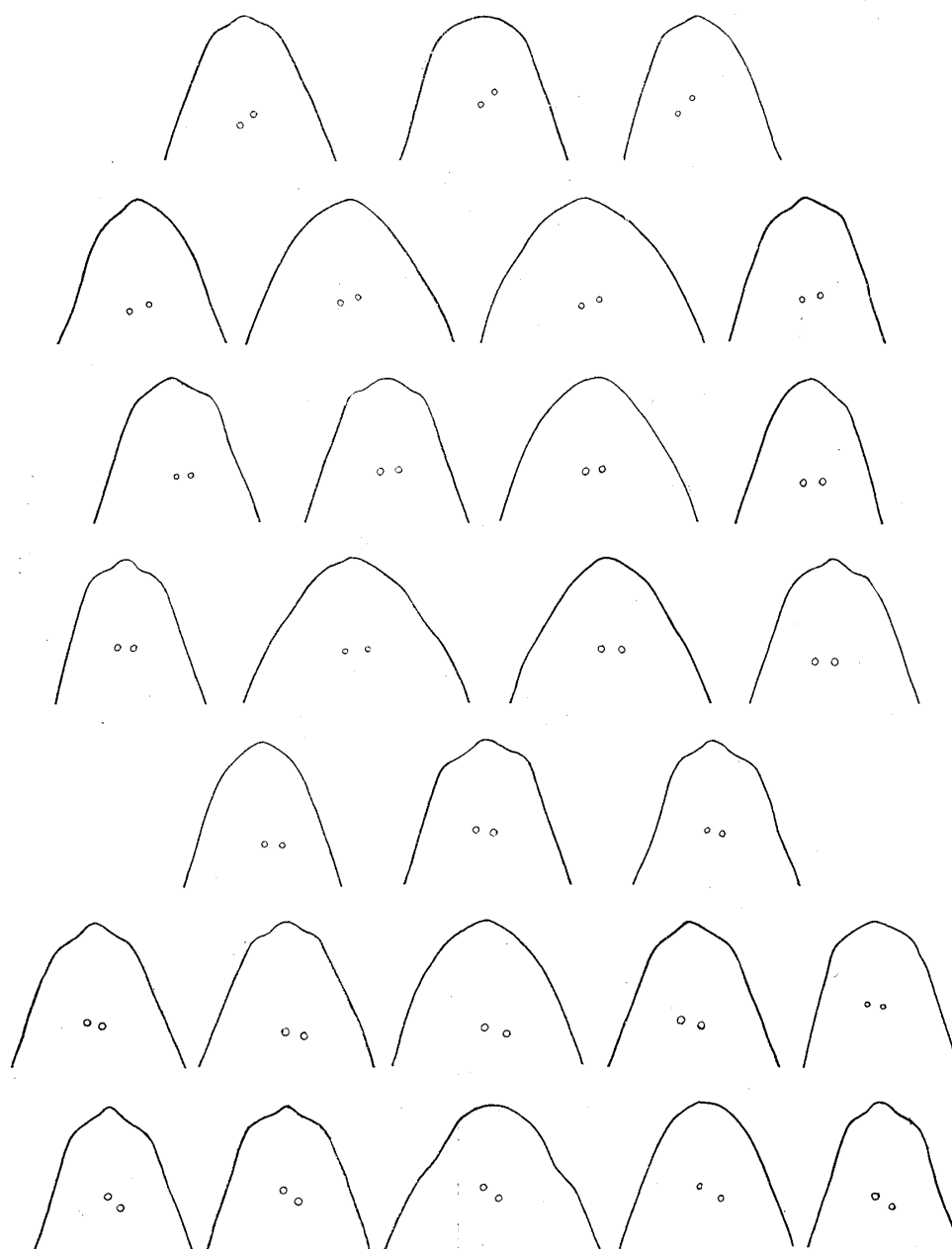


Fig. 7. *Perlohmanna coiffaiti* Grandjean. Variation of rostral margins and arrangement of rostral setae (only their insertions are shown).

In the specimens examined the setal formula of the epimerata is normally shown as 3—1—3—4 except for in two specimens in which the formula is shown as 3—1—3—5 on the right side.

*Material examined* 2 exs., Sarobetsu Moor, 12~14V-II-1966; 1 ex., Nopporo National Forest near Sapporo, 30-VIII-1966; 4 exs., Mt. Soranuma near Sapporo, 28-V-1967; 67 exs., Glehn's spruce forests near Obihiro, 9-11-XI-1968, T. Fujikawa leg.

*Measurement* Length: 1000 (1107) 1257  $\mu$ ; width: 407 (501) 571  $\mu$ .

*Perlohmannia gigantea* (Aoki)

*Apolohmannia gigantea* Aoki, 1960, Japan. J. Zool., 12: 507, figs. 1-3.

This species has been known to occur in Honshu, Japan, its type-locality being Kare-Numa, Nikko. Having examined materials from Hokkaido as well as from Honshu, the main characters distinguishing *P. gigantea* from *P. coiffaiti* are: (1) tridactility, (2) larger number of sensillar pectinations (7-11), and (3) much larger body size (1400-1600  $\mu$ ).

*Material examined* 2 exs., Higashi-Misumai near Sapporo, 26-IX-1968, T. Fujikawa leg.

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REFERENCES

- Aoki, J., 1960. Japan. J. Zool., 12, 507.  
Grandjean, F., 1961. Acarologia, 3, 604.